

IN THE CLAIMS:

The following is a listing of all the claims as they currently stand. Kindly amend claims 1, 3, 5, 6, 18-20, 23, 25, 30, and 34-35 as noted below. Claims 2, 11, 21, 38-61 are canceled. Claims 62-90 are added.

1. (Currently amended) An endovascular graft or section thereof comprising:

a flexible material portion comprising a plurality of layers and a transversely oriented member secured to the flexible material portion with a joint that includes at least one flap of the flexible material folded back and secured to form a loop portion about the transversely oriented member;

wherein the loop portion is formed of a layer that is secured to itself.

2. (Canceled)

3. (Currently amended) The endovascular graft or section thereof of claim 1 wherein the transversely oriented member comprises a material having high strength relative to the strength of the flexible material portion.

4. (Original) The endovascular graft or section thereof of claim 3 wherein the transversely oriented member comprises nickel titanium.

5. (Currently amended) The endovascular graft or section thereof of claim 1 wherein the flap is secured by bonding with an adhesive to the flexible material portion of the graft or section thereof.

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6. (Currently amended) The endovascular graft or section thereof of claim 5 wherein the adhesive ~~is selected from the group comprising~~ comprises FEP and or PFA.

7. (Withdrawn) The endovascular graft or section thereof of claim 1 wherein the flexible material portion comprises fusible material and the flap is secured by thermomechanical compaction of the flap and a portion of the fusible material in contact with the flap.

8. (Withdrawn) The endovascular graft or section thereof of claim 7 wherein the fusible material comprises ePTFE.

9. (Withdrawn) The endovascular graft or section thereof of claim 8 wherein the ePTFE has a thickness of about 0.001 to about 0.01 inch.

10. (Withdrawn) The endovascular graft or section thereof of claim 8 wherein the ePTFE is sintered.

11. (Canceled)

12. (Original) The endovascular graft or section thereof of claim 1 wherein the at least one flap is about 1 to about 25 square millimeters.

13. (Original) The endovascular graft or section thereof of claim 1 wherein the joint comprises a plurality of flaps of flexible material folded back and secured to form loop portions about the transversely oriented member.

14. (Original) The endovascular graft or section thereof of claim 1 wherein the joint comprises about 2 to about 24 flaps of flexible material folded back and secured to form loop portions about the transversely oriented member.

15. (Original) The endovascular graft or section thereof of claim 1 wherein the transversely oriented member comprises a circumferentially oriented member.

16. (Original) The endovascular graft or section thereof of claim 1 wherein the transversely oriented member comprises a connector member or portion thereof.

17. (Original) The endovascular graft or section thereof of claim 1 wherein the transversely oriented member comprises an expandable stent or portion thereof.

18. (Currently amended) The endovascular graft or section thereof of claim 17 wherein the expandable stent or a portion thereof comprises a self-expanding stent.

19. (Currently amended) An endovascular graft or section thereof comprising a flexible material portion and a transversely oriented member secured to the flexible material portion with a ~~joining~~ means for joining that includes at least one flap means of the flexible material that forms a loop portion that is secured to itself which is configured to transfer tensile force on the transversely oriented member into a shear component of force on the flap means and flexible material portion.

20. (Currently amended) An endovascular graft or section thereof comprising a flexible material portion comprising a plurality of layers and ~~an~~ a connector member secured to the flexible material portion with a joint that includes at least one flap of the flexible material folded back and secured to form a loop portion about the connector member;

wherein the looped portion is formed of a layer that is secured to itself.

21. (Canceled)

22. (Original) The endovascular graft or section thereof of claim 20 wherein the connector member is comprised of a material having high strength relative to the strength of the flexible material.

23. (Currently amended) The endovascular graft or section thereof of claim 22 wherein the connector member comprises nickel titanium.

24. (Original) The endovascular graft or section thereof of claim 20 wherein the flap is secured by bonding with an adhesive to the flexible material of the graft or section thereof.

25. (Currently amended) The endovascular graft or section thereof of claim 24 wherein the adhesive ~~is selected from the group comprising~~ comprises FEP ~~and or~~ PFA.

26. (Withdrawn) The endovascular graft or section thereof of claim 20 wherein the flexible material portion comprises fusible material and the flap is secured by thermomechanical compaction of the flap and a portion of the fusible material in contact with the flap.

27. (Withdrawn) The endovascular graft or section thereof of claim 26 wherein the fusible material comprises ePTFE.

28. (Withdrawn) The endovascular graft or section thereof of claim 27 wherein the ePTFE has a thickness of about 0.001 to about 0.01 inch.

29. (Withdrawn) The endovascular graft or section thereof of claim 27 wherein the ePTFE is sintered.

30. (Currently amended) The endovascular graft or section thereof of claim 20 wherein the flexible material portion further comprises a plurality of layers, and the loop portion flap is formed of a layer that is secured to another layer.

31. (Original) The endovascular graft or section thereof of claim 20 wherein the at least one flap is about 1 to about 25 square millimeters.

32. (Original) The endovascular graft or section thereof of claim 20 wherein the joint comprises a plurality of flaps of flexible material folded back to form loop portions about the connector member which are secured in the looped configuration.

33. (Original) The endovascular graft or section thereof of claim 20 wherein the joint comprises about 2 to about 24 flaps of flexible material folded back to form loop portions about the connector member which are secured in the looped configuration.

34. (Currently amended) An endovascular graft or section thereof comprising:

a flexible material portion and ~~an~~ a connector member secured to the flexible material portion with a ~~joining~~ means for joining that includes at least one flap means of the flexible material that forms a loop portion that is secured to itself which is configured to transfer tensile force on the connector member into a shear component of force on the flap means and flexible material portion.

35. (Currently amended) A method for forming a joint between a connector member and a multiple layered flexible material portion of an endovascular graft, comprising:

fixing a flap of the flexible material portion about at least a portion of the connector member so as to form a looped portion about the connector member; and
securing the flap of the flexible material to itself, such that wherein tensile force on the connector member is transferred into a shear component of force on the fixed portion of the flap.

36. (Withdrawn) The method of claim 35 wherein the flexible material portion of the endovascular graft comprises ePTFE and the flap is fixed about at least a portion of the connector member by thermomechanical compaction.

37. (Original) The method of claim 35 wherein the flexible material portion of the endovascular graft comprises ePTFE and the flap is fixed about at least a portion of the connector member by FEP or PFA.

38.-61. (Canceled)

62. (New) An endovascular graft or section thereof comprising:
a generally tubular flexible material portion; and
a serpentine expandable member circumferentially oriented about a circumference of the generally tubular flexible material portion,

wherein the expandable member is secured to the generally tubular flexible material portion with a joint that includes at least one flap of the flexible material portion folded back and secured to form a loop portion about the serpentine expandable member.

63. (New) The endovascular graft or section thereof of claim 62 wherein the serpentine expandable member comprises a first set of apices that are directed in a first direction and a second set of apices that are directed in a direction substantially opposite of the first direction,

wherein at least some of the apices in the first set further comprise connector elements that extend in a direction substantially parallel to a longitudinal axis of the generally tubular flexible material portion and beyond an edge of the generally tubular flexible material portion.

64. (New) The endovascular graft or section thereof of claim 62 wherein the generally tubular flexible material portion comprises a plurality of layers, wherein two adjacent layers are selectively attached to each other to form an inflatable channel between the two adjacent layers.

65. (New) The endovascular graft or section thereof of claim 64 wherein the inflatable channel is helically shaped.

66. (New) The endovascular graft or section thereof of claim 64 wherein the inflatable channel comprises a plurality of circumferential rings.

67. (New) The endovascular graft of section thereof of claim 62 wherein the generally tubular flexible material portion comprises a plurality of layers and the loop portion is formed of a layer that is secured to itself.

68. (New) The endovascular graft of section thereof of claim 62 wherein the generally tubular flexible material portion comprises a plurality of layers and the loop portion is formed of a layer that is secured to another layer.

69. (New) An endovascular graft or section thereof comprising:
a multi-layered flexible material portion that comprises at least two layers;
an inflatable channel formed between two layers of the flexible material portion;
an expandable member positioned at or adjacent an end of the flexible material portion,

wherein the expandable member is secured to at least one layer of the flexible material portion with a joint that includes at least one flap of the flexible material folded back and secured to form a loop portion about the expandable member.

70. (New) The endovascular graft or portion thereof of claim 69 wherein the inflatable channel is helically shaped.

71. (New) The endovascular graft or section thereof of claim 69 wherein the inflatable channel comprises a plurality of circumferential rings.

72. (New) The endovascular graft of section thereof of claim 69 wherein the generally tubular flexible material portion comprises a plurality of layers and the loop portion is formed of a layer that is secured to itself.

73. (New) The endovascular graft of section thereof of claim 69 wherein the generally tubular flexible material portion comprises a plurality of layers and the loop portion is formed of a layer that is secured to another layer.

74. (New) An endovascular graft or section thereof comprising a flexible material portion comprising a plurality of layers and a member secured to the flexible material portion with a joint that includes at least one flap of the flexible material folded back and secured to form a loop portion about the member, wherein the loop portion is formed of a layer that is secured to itself.

75. (New) The endovascular graft or section thereof of claim 74 wherein the member comprises a material having high strength relative to the strength of the flexible material portion.

76. (New) The endovascular graft or section thereof of claim 74 wherein the member comprises nickel titanium.

77. (New) The endovascular graft or section thereof of claim 74 wherein the flap is secured by bonding with an adhesive to the flexible material portion of the graft or section thereof.

78. (New) The endovascular graft or section thereof of claim 77 wherein the adhesive comprises FEP or PFA.

79. (New) The endovascular graft or section thereof of claim 74 wherein the flexible material portion comprises fusible material and the flap is secured by thermomechanical compaction of the flap and a portion of the fusible material in contact with the flap.

80. (New) The endovascular graft or section thereof of claim 79 wherein the fusible material comprises ePTFE.

81. (New) The endovascular graft or section thereof of claim 80 wherein the ePTFE has a thickness of about 0.001 to about 0.01 inch.

82. (New) The endovascular graft or section thereof of claim 80 wherein the ePTFE is sintered.

83. (New) The endovascular graft or section thereof of claim 74 wherein the at least one flap is about 1 to about 25 square millimeters.

84. (New) The endovascular graft or section thereof of claim 74 wherein the joint comprises a plurality of flaps of flexible material folded back and secured to form loop portions about the member.

85. (New) The endovascular graft or section thereof of claim 74 wherein the joint comprises about 2 to about 24 flaps of flexible material folded back and secured to form loop portions about the member.

86. (New) The endovascular graft or section thereof of claim 74 wherein the member comprises a circumferentially oriented member.

87. (New) The endovascular graft or section thereof of claim 74 wherein the member comprises a connector member or portion thereof.

88. (New) The endovascular graft or section thereof of claim 74 wherein the member comprises an expandable stent or portion thereof.

89. (New) The endovascular graft or section thereof of claim 88 wherein the expandable stent or a portion thereof comprises a self-expanding stent.

90. (New) An endovascular graft or section thereof comprising a flexible material portion comprising a plurality of layers and a member secured to the flexible material portion with a means for joining that includes at least one flap means of the flexible material that forms a loop portion that is secured to itself.
